REMARKS

Claims 1-16 are all the claims pending in the application. By this Amendment, Applicant adds claim 16. New claim 16 is clearly supported throughout the specification. For example., claim 16 is clearly supported by Figure 3 and the corresponding paragraphs in the specification (page 17, line 4 to page 20, line 7, page 29, line 14 to page 31, line 11.

I. Preliminary Remarks

The Examiner's acknowledgment of the claim to foreign priority and confirmation that the certified copy of the priority documents was received is gratefully noted, and also the Examiner's initialing of the references listed on Form PTO-1449 submitted with the Information Disclosure Statement filed on February 5, 2001.

II. Rejection under 35 U.S.C. § 102(b)

The Examiner rejected claims 1, 6 and 11 under 35 U.S.C. § 102(b) and claims 2-5, 7-10 and 12-15 under 35 U.S.C. § 103(a). In particular, the Examiner rejected claims 1, 6 and 11 under 35 U.S.C. § 102(b) as being anticipated by European Patent No. 0,443,851 A1 to MacDonald. However, EP 0,443,851 A1 is issued to Kirk. Therefore, it is assumed that the Examiner rejected these claims as being anticipated by European Patent No. 0,443,851 A1 to Kirk (hereinafter "Kirk"). The Examiner's careful reconsideration is submitted to be appropriate in view of the following comments.

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Claim 1

With respect to claim 1, the Examiner maintains that Kirk discloses all of the elements set

forth in the noted claim including:

> a parameter registration device which
> stores, in a third area of storage device
> parameters that are to be referred to for
> each kind of process that is performed for
> filtering the sample image data in the
> second area; and
>
> a filtering device, which while referring to
> the parameters in the third area, performs
> in a predetermined order a number of
> different processes for filtering....

The Examiner asserts that a parameter registration device and a filtering device as set forth in

claim 1 is taught by Kirk's LUTs 4 and processor 7, respectively. This ground of rejection is

respectfully submitted to be incorrect as a technical matter. Kirk's discussion of LUT 4 and

processor 7 has been carefully studied, and such teachings of Kirk are very dissimilar.

First, the Examiner asserts that a parameter registration device as set forth in claim 1, is

similar to LUT 4, for support the Examiner cites to page 3, lines 13-20 (see page 3 of the Office

Action). This passage is unrelated to the LUT 4; therefore, the Examiner probably meant page 4,

lines 13-20. Kirk teaches an image processing for performing image processing quicker. To this

end, Kirk teaches converting an original image in CMYK stored in storage area 1 to a LCH

image by using a conventional LUT (look-up table) 2 and storing this LCH image in storage area

3. The LCH images from the storage area 3 are then applied to LUT 4 (this table has an address

corresponding to each possible pixel value in terms of LCH). Initially, the image is passed

unchanged to the display 6, via LUT 5 (which converts LCH image into a RGB, display image),

see Fig. 1; page 4, lines 5 to 42. However, contents of LUT 4 can be changed by using a

processor 7, which allows the user to modify light, color and hue via input controls 8-10. As the

user twitches these controls, changes are implemented and the modified image is displayed on

the display 6 (Fig. 3; page 4, lines 22 to 27).

However, Kirk's LUT 4 is a <u>look up table with addresses corresponding to each possible</u>

<u>pixel value in terms of LCH</u>. That is, Kirk's LUT 4 immediately modifies the stored image to be

transmitted to display 6. This is consistent with Kirk's teachings of very fast update speed

because so few entries are being calculated at the same time; the update speed will easily exceed

the display refresh screen (page 4, lines 18 to 27). In fact, Kirk only has two storage areas,

CMYK storage and LCH storages. In short, Kirk's LUT 4 modifies image data after each

manipulation by the user just like the prior art discussed in the Application. Kirk fails to teach or

suggest <u>storing values</u> entered by the operator <u>to be referred to for processing</u> and <u>not</u>

<u>immediately applied to the image as they are being entered</u>.

In addition, the Examiner asserts that the filtering device as set forth in claim 1 is similar

to the processor 7, for support the Examiner cites page 3, lines 6-7 ("apparatus for interactively

modifying an image represented by digital data defining the colour content of pixels of the image

in terms of first colour components defining a first colour space comprises first transform means

for transforming the image into a second colour space..."). Again, it appears the Examiner

meant page 4, lines 6-7 ("The 32 bit pixel values are converted from CMYK to the second colour

space, lightness and colourfulness and hue (LCH) in a conventional manner by a look-up table

(LUT) 2 or other processing means, the result of the conversion being stored in a frame store 3").

However, the cited passages refer to LUT 2 and store 3. If as asserted by Examiner, LUT

4 is a third storage area, then Kirk fails to teach or suggest using parameters in the third storage

area for filtering. That is, Kirk teaches modifying lightness, color and hue with controls 8-10 as

the user enters them (page 4, line 25 to 28). Once, the operator decides that the image displayed

on the monitor 6 is acceptable, he notifies the processor 7, and the processor 7 feeds the final

results to LUT 11, which also receives values from the store 3. These values are converted by

LUT 11 to a final second colour space and are then passed to LUT 12, which converts these final

values to a printing format and stores them in store 13 (Fig. 1; page 4, lines 28 to 33).

In other words, the values are fed in from processor 7 and not from LUT 4. Moreover,

Kirk teaches modifying lightness, color and hue with controls 8-10 as they are entered by the

user, not in any predetermined order. In short, L, C, H is not being modified in a predetermined

order and the processor 7 does not refer to the contents of the LUT 4 to generate the final

representation, instead the values are just read from the processor 7 (see Fig. 1; page 4, lines 28

to 33).

Therefore, a parameter registration device and a filtering device as set forth in claim 1

is not suggested or taught by Kirk, which lacks a third storage area storing parameters to be

later referred to for each kind of process for filtering and filtering performed in a

predetermined order based on parameters in the third area. For at least these reasons,

independent claim 1 is patentably distinguishable from Kirk and it is appropriate and necessary

for the Examiner thus to reconsider and to withdraw this rejection of independent claim 1.

Claims 6 and 11

Claims 6 and 11 contain features similar to the features argued above with respect to

claim 1, namely, storing parameters in a third area to be later used in filtering and filtering in a

predetermined order. Therefore, the arguments with respect to claim 1 are submitted to apply

with equal force here. For at least these reasons, independent claims 6 and 11 are patentably

distinguishable from Kirk and it is appropriate and necessary for the Examiner thus to reconsider

and to withdraw this rejection of independent claims 6 and 11.

III. Rejection under 35 U.S.C. § 103(a).

Claims 2-5, 7-10, and 12-15 stand rejected under 35 U.S.C. § 103(a) as being

unpatentable over MacDonald (hereinafter "Kirk") in view of U.S. Patent No. 4,833,625 to

Fisher (hereinafter "Fisher"). This rejection is respectfully traversed with respect to claims 2-5,

7-10 and 12-15 dependent upon claims 1, 6 and 11, respectively. It was already demonstrated

that Kirk does not meet all the requirements of independent claims 1, 6 and 11. Fisher is relied

upon only for its teaching of pipelined architecture that sequentially performs a number of

functions.

The Examiner asserts that it would have been obvious to combine Kirk and Fisher to

avoid information reductions in the output image and consequently, to avoid visible contouring

in the output image (see page 4 of the Office Action). However, an artisan of ordinary skill

confronted with the problem of quick processing, would never have even thought to consult a

reference like Fisher.

Fisher teaches that a requirement for PACS image processing is multimodality display

capability (displaying images of different sizes and to be able to flip the images in case of

improper recording (col. 15, lines 5 to 18). Specifically, Fisher teaches manipulating a grey

scale image data by first performing subtraction between two images, then contrast enhancement,

spatial filtering, continuous zoom, sequentially address generation to write processed image data

to display memory (col. 16, lines 5 to 20).

However, Fisher teaches sequential processing for comparison (subtraction operation) to

come first because it requires full dynamic range of the source images, contrast manipulation to

be performed next, because filtering operation can reduce the number of grey levels in the output

image causing visible contours, and filtering before zooming, whereas Kirk just teaches

modifying lightness, colorfulness and hue of an image.

The Examiner alleges that the motivation would have been to allow for filtering device to

avoid informational reductions and visible contouring in the output of the image. However, it is

respectfully submitted that this general purpose would not have led a person of ordinary skill in

the art to the claimed invention. Specifically, by way of example among other reasons, a person

of ordinary skill in the art would not have been led to apply Fisher's sequence to Kirk's editing

of LCH. In fact, one of ordinary skill in the art would not have included Fisher in Kirk's image

processing because it would defeat the purpose of Kirk's quick processing by immediately

applying operator's changes to the image, thereby decreasing the processing time.

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In addition, with respect to claims 3, 8 and 13, the Examiner asserts that it is an obvious design choice to modify the combination of Kirk and Fisher to include a specific named order of steps (see page 5 of the office action). This assertion is respectfully submitted to be incorrect as a technical matter. The Examiner is respectfully requested to review pages 7 and 8 of the Application, where it is indicated that the order in which processes are performed minimizes the reduction in color and spatial information (page 7, line 26 to page 8 line 4).

Therefore, Fisher does not compensate for the above-identified deficiencies of Kirk. Together, the combined teachings of these references would not have (and could not have) led the artisan of ordinary skill to have achieved the subject matter of claims 1, 6 and 11. Since claims 2-5, 7-10 and 12-15 are dependent upon claims 1, 6 and 11, respectively, they may be patentable at least by virtue of their dependency. The Examiner is respectfully requested to reconsider and to withdraw this rejection of claims 2-5, 7-10 and 12-15.

IV. New Claim

In order to provide more varied protection, new method claim 16 is added. Claim 16 is patentable over the prior art cited by the Examiner at least because of its recitation of performing filtering in a predetermined order and storing the parameters in a third area of the storage device.
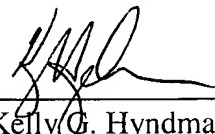
V. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

Applicant hereby petitions for any extension of time which may be required to maintain

the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to

be charged to Deposit Account No. 19-4880. Please also credit any overpayments to said

Deposit Account.

Respectfully submitted,

Kelly G. Hyndman
Registration No. 39,234

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

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